

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT TRADE NAME	Celatom FW-12, FW-14, FW-18, FW-20, FW-40, FW-50, FW-60, FW-70, FW-80, SP
MANUFACTURER	EP Minerals, LLC., 9875 Gateway Dr., Suite 1000, Reno, NV 89521
TELEPHONE NO.	(775) 824 7600 (Monday – Friday 8:00 am PST – 5:00 pm PST)
CHEMICAL NAME	Diatomaceous Earth, Flux-Calcined
CHEMICAL FAMILY	Silica
MATERIAL USE	Filter Aid
DATE OF PREPARATION	February 28, 2007

SECTION 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Appearance//Color/Odor	A white, low density powder. There is no distinctive odor.
OSHA REGULATORY STATUS	This material is considered hazardous by the OSHA Hazard Communication Standard (29CFR 1910.1200)
POTENTIAL HEALTH EFFECTS	See below and Section 11 for additional information
Likely Routes of Exposure	See below
EYE	May cause irritation (tear formation and redness) if dust gets in eyes.
SKIN	Not absorbed by the skin, but may cause dryness if prolonged exposure.
INGESTION	Ingestion of small to moderate quantities is not considered harmful, but may cause irritation of the mouth, throat and stomach.
INHALATION	Acute inhalation can cause dryness of the nasal passage and lung congestion, coughing and general throat irritation. Chronic inhalation of dust should be avoided.
CHRONIC EFFECTS	Chronic inhalation of crystalline silica dust in excess of the Threshold Limit Value (TLV) recommended by the American Conference of Governmental Industrial Hygienists (ACGIH)(.025mg/m ³) or in excess of the Permissible Exposure Limit (PEL) established by OSHA (0.050mg/m ³), over a prolonged number of years may contribute to silicosis. Crystalline silica, when inhaled as respirable dust, has been classified in a 1997 monograph (Volume 68, "Silica") of the International Agency for Research on Cancer (IARC) as carcinogenic to humans over prolonged and sustained exposure.
CONDITIONS AGGRAVATED BY EXPOSURE	Pre-existing diseases of the upper respiratory tract and lung such as bronchitis, emphysema, and asthma.
ENVIRONMENTAL EFFECTS	There are no significant environmental effects.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT IDENTIFICATION	APPROXIMATE CONCENTRATION (%)	C.A.S. NUMBERS	EINECS	R Factors
Diatomaceous Earth, Flux-Calcined (kieselguhr)	100%	68855-54-9	272-489-0	
Crystalline Silica (Cristobalite)	35-50%	14464-46-1	238-455-4	R48/20

SECTION 4: FIRST AID MEASURES

EYE	Flush eyes with generous quantities of water or eye rinse solution. Consult physician if irritation persists.
SKIN	Use moisture renewing lotions if dryness occurs.
INGESTION	Drink generous amounts of water to reduce bulk and drying effects.
INHALATION	Remove to fresh air. Blow nose to evacuate dust.
NOTE TO PHYSICIANS	No special notes.
ANTIDOTE	Not applicable

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SECTION 5: FIRE FIGHTING MEASURES

FLAMMABILITY	This material is not flammable.
EXTINGUISHING MEDIA	Not applicable, the material is not flammable.
FIRE-FIGHTING PROCEDURES	Not applicable, the material is not flammable.
PROTECTIVE EQUIPMENT	Not applicable, the material is not flammable
HAZARDOUS COMBUSTION PRODUCTS	Not applicable, the material does not combust.
SPECIFIC PHYSICAL AND CHEMICAL HAZARDS	Not applicable, the material is not flammable.
EXPLOSION DATA	Not applicable, the material is not explosive.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS	If dust is present, use respirator fitted with particulate filter as specified in Section 8. Protect eyes with goggles.
ENVIRONMENTAL PRECAUTIONS	This material is not a significant environmental concern.
CONTAINMENT AND CLEANUP	Vacuum clean spillage, wet sweep or wash away. Avoid creating dust.

SECTION 7: HANDLING AND STORAGE

HANDLING	Minimize dust generation. Avoid contact with eyes. Avoid breathing dust. Repair or dispose of broken bags.
STORAGE	Store in a dry place to maintain packaging integrity and product quality. Do not store near hydrofluoric acid. Observe all label precautions and warnings.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES:				
Component	OSHA PEL	ACGIH TLV	MSHA PEL	NIOSH REL
Diatomaceous Earth, Flux-Calcined (kieselguhr)	See below	See below	See below	See below
Crystalline Silica (Cristobalite)	0.050 mg/m ³	0.025 mg/m ³	0.5*10/(% respirable crystalline silica +2)	0.025 mg/m ³
ENGINEERING CONTROLS	Local – Control dust within recommended TLV/PEL. Refer to ACGIH publication "Industrial Ventilation" or similar publications for design of ventilation systems.			
PERSONAL PROTECTIVE EQUIPMENT:	See below			
EYE / FACE	Goggles to protect from dust			
SKIN	No special equipment is needed.			
RESPIRATORY	Respirators fitted with filters certified to standard 42CFR84 under series N95 should be worn when dust is present. If the dust concentration is less than ten (10) times the Permissible Exposure Limit (PEL) use a quarter or half-mask respirator with a N95 dust filter or a single use dust mask rated N95. If dust concentration is greater than ten (10) times and less than fifty (50) times the PEL, a full-face piece respirator fitted with replaceable N95 filters is recommended. If dust concentration is greater than fifty (50) and less than two hundred (200) times the PEL use a power air-purifying (positive pressure) respirator with a replaceable N95 filter. If dust concentration is greater than two hundred (200) times the PEL use a type C, supplied air respirator (continuous flow, positive pressure), with full face piece, hood or helmet.			
GENERAL HYGIENE	Avoid breathing dust. Avoid contact with eyes. Wash hands after handling and before eating or drinking.			

For sampling silica dusts refer to NIOSH Analytical Method 7500 or OSHA method ID 142

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE, COLOR	Light pink to white powder	ODOR	Odorless
PHYSICAL STATE	Solid	pH (10% SUSPENSION)	10
VAPOR PRESSURE	Not applicable	VAPOR DENSITY	Not applicable
BOILING POINT	Not applicable	MELTING POINT	> 1300 °C
FLASH POINT	Not applicable	FLAMMABILITY	Not applicable
FLAMMABILITY LIMITS	Not applicable	AUTOIGNITION TEMPERATURE	Not applicable
DECOMPOSITION TEMPERATURE	> 1300 °C	SPEC. GRAVITY / REL. DENSITY	2.3
EVAPORATION RATE	Not applicable	COEFF. – WATER / OIL	Not applicable
ODOR THRESHOLD	Not applicable	SOLUBILITY – WATER	< 1%
PARTITION COEFFICIENT	Not applicable		

SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY	Material is stable.
PHYSICAL HAZARDS	Material is not reactive.
CONDITIONS TO AVOID	Not applicable
INCOMPATIBLE MATERIALS	Hydrofluoric acid. Products containing silica may react violently with hydrofluoric acid.
HAZARDOUS DECOMPOSITION PRODUCTS	Not applicable

SECTION 11: TOXICOLOGICAL INFORMATION

CHRONIC EFFECTS / CARCINOGENICITY	Flux-calcined diatomaceous earth (Kieselguhr) is composed of amorphous and crystalline silica. Amorphous silica is not classifiable as carcinogenic to humans. Crystalline silica, when inhaled as respirable dust, has been classified as carcinogenic to humans over prolonged and sustained exposure. Long-term inhalation of respirable crystalline silica may contribute to the respiratory disease "silicosis", a non-cancerous lung disease. In a 1997 monograph (Volume 68, "Silica"), the International Agency for Research on Cancer (IARC) concluded that overall the epidemiological findings support increased risk of lung cancer from inhaled crystalline silica resulting from occupational exposure (classified in Group 1), while there was inadequate evidence in humans for the carcinogenicity of amorphous silica (classified in Group 3).
ROUTE OF EXPOSURE	Inhalation (chronic)
SYMPTOMS	Not available
LD50	Not available
IMMEDIATE AND DELAYED EFFECTS	No immediate effects. See CHRONIC EFFECTS for potential long-term effects when prolonged exposure to levels of crystalline silica in excess of OSHA PEL and ACGIH TLV.
CORROSIVENESS, SENSITIZATION, IRRITANCY	Not applicable
REPRODUCTIVE TOXICITY	Not available
TERATOGENICITY, MUTAGENICITY	Not available
TOXICOLOGICALLY SYNERGISTIC PRODUCTS	Inhaled smoke from tobacco products (chronic).

SECTION 12: ECOLOGICAL INFORMATION

CHARACTERISTICS	Non-biodegradable, inert, with little potential for bioaccumulation.
POSSIBLE EFFECTS	Diatomaceous earth products have shown some efficacy as a natural insecticide, but otherwise have no demonstrated toxicity in regards to aquatic or terrestrial life.

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SECTION 13: DISPOSAL CONSIDERATIONS		
WASTE DISPOSAL	If this material as supplied becomes a waste, use solid waste disposal common to landfill type operations or in slurry to sumps. Not considered a hazardous waste under RCRA (40CFR Part 261).	
PACKAGING DISPOSAL	Dispose of in accordance with applicable laws and regulations, typically solid waste disposal common to landfill type operations.	
SECTION 14: TRANSPORT INFORMATION		
BASIC SHIPPING INFORMATION	DOT shipping classification 55 (no restrictions). Technical name is "Diatomaceous Earth".	
ADDITIONAL INFORMATION	No special requirements or placarding necessary.	
SECTION 15: REGULATORY INFORMATION		
U.S. FEDERAL:		
OSHA	Under the Hazard Communication Standards, crystalline silica is classified as a toxic and hazardous substance.	
TSCA	Crystalline silica appears on the EPA TSCA inventory list, but is not regulated.	
CERCLA	Crystalline silica is not classified as a hazardous substance under regulations of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 40 CFR 302.	
SARA TITLE III	Not listed.	
NTP	Respirable crystalline silica, primarily quartz dusts occurring in industrial and occupational settings, is classified as a carcinogen.	
INTERNATIONAL:		
IARC	"Inhaled crystalline silica from occupational sources" – Group 1 – is classified in IARC as a carcinogen.	
WHMIS Classification	Crystalline silica is classified as a D2A substance	
WHMIS Ingredient Disclosure List	Included for disclosure at 1% or greater. Meets criteria for disclosure at 0.1% or greater.	
EEC Label (Risk/Safety Phrases)	R48/20, S22, S38	
SECTION 16: OTHER INFORMATION		
	<p>NFPA</p> <p>4-Extreme 3-High 2-Moderate 1-Slight 0-Insignificant</p>	<p>HMIS</p> <p>* Health 0 Flammability 0 Reactivity E Protective Equipment</p>
ORIGINAL ISSUE DATE	November 18, 1985	
REVISION DATE	February 27, 2007	
REVISION NO.	10	

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